7. (Amended) A method in accordance with claim 1 wherein the target gene silencing is post-transcriptional gene silencing (PTGS).

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8. (Amended) A method of detecting the silencing of a target gene in organism as determined in claim 1, which method further comprises the steps of:

[(i) obtaining a sample of material from said organism,

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(ii)producing a nucleic acid extract from said sample of,

(iii) analysing said extract such as to determine the presence or absence of SRMS in said extract,

(iv) characterising any SRMs which are present in said extract such as to determine sequence identity or similarity with said target gene,

(v) correlating the presence of SRMs in said extract which share sequence identity or similarity with said target gene with the silencing in said organism of said target gene]

(v) characterizing any SRMs which are present in said extract such as to determine sequence identity or similarity with said target gene, and

(vi) correlating the presence of SRMs in said extract which share sequence identity or similarity with said target gene with the silencing of said target gene in said organism.

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11. (Amended) A method of identifying a ~~silenced~~ target gene [which is being silenced] ~~in~~ an organism in which gene silencing is ~~detected~~ as claimed in claim 8, which method ~~further~~ comprises the steps of:

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[(i) obtaining a sample of material from said organism,

(ii) producing a nucleic acid extract from said sample,

(iii) analyzing said extract such as to determine the presence or absence of SRMs in said extract,

iv] (vii) preparing a library of genes from said organism, and

[(v)] (viii) identifying [any genes which are being silenced in the organism as] those genes in said library which share sequence identity or similarity with any SRMs which are present in the extract as being genes which are silenced in the organism.

12. (Amended) A process for isolating one or more RNA molecules associated with target gene silencing from a sample of material, which process comprises the steps of:

(a) producing a nucleic acid extract from said sample,

(b) purifying said extract to produce purified RNA molecules by carrying out at least one purification step selected from the following steps (i) filtration; (ii) differential precipitation (iii) ion exchange chromatography.

17. (Amended) A process for isolating a silencing agent comprising SRMs for a target gene, which process comprises the steps of:

(i) silencing said target gene in said organism,

(ii) obtaining a sample of material from said organism,

(iii) performing a process in accordance with claim 16 to isolate[d] said SRMs.

Please add the following new claim:

32. A method as claimed in claim 1, wherein said target

gene is selected from the group consisting of a ripening specific gene; a gene involved in pollen formation; a gene involved in lignin biosynthesis; a gene involved in flower pigment production; a gene involved in regulatory pathways controlling development or environmental responses; and a gene involved in the production of toxic secondary metabolites.

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REMARKS

A restriction requirement under 35 U.S.C. §121 was set forth in the Official Action dated August 3, 2000 in the above-identified patent application. It is the Examiner's position that claims 1-31 in the present application are drawn to three (3) patentably distinct invention which are as follows:

Group I: Claims 1, 5-7, 12-17, drawn to a method for detecting small RNA molecules;

Group II: Claims 8-11, drawn to a method for identifying a silenced gene target;

Group III: Claims 18-20 and 26-27 drawn to a method for silencing a target gene, a nucleic acid molecule and a host cell transformed with the same nucleic acid.

Applicants respectfully traverse the restriction between the group I and group II inventions. A withdrawal or modification of the restriction requirement is clearly in order for the reasons set forth below.

According to the MPEP §803.01, there are two criteria for restriction between inventions which are alleged to be patentably distinct: 1) the inventions must be independent and distinct as claimed and 2) there must be a serious burden on the Examiner if the restriction is not required.

As set forth above, the Examiner has asserted that claims 1, 5-7 and 12-17 and claims 8-11 are directed to two patentably distinct inventions. Original claim 17 which is